

genetic importance to it; but being occupied with other investigations he did not follow up his observations, and refrained from publication. Haddon also has described and figured it for certain Opisthobranchs, but does not seem to have observed it in the Proso-branchs he studied.

The region between these two bands is occupied by numerous very fine cilia, which, as in the *Polygordius*-larva, are continuous with those lining the mouth-opening and the œsophagus. The arrangement of cilia which is to be found in the typical Annelid larva is therefore almost exactly reproduced in the Gasteropod Veliger.

Arguing from ontogeny, a phylogenetic history of the Gasteropods somewhat as follows may be constructed. They and the Annelida have had their origin in a Trochophore. In the Gasteropods this ancestor developed a univalve shell, represented by the larval shell so often replaced as development proceeds by another more ornamented and more complicated in structure. The development of this shell, by increasing the specific gravity of the animal, rendered the simple præoral cilia of the Trochophore insufficient for active locomotion, and the extent of the band was increased by the region of the body on which it occurred being as it were pulled out laterally, the characteristic velum being thus produced. Perhaps, too, in the presence of the shell, a reason can be found for the absence of metameric segmentation in the Gasteropods.—*Johns Hopkins University Circulars*, Oct. 1885, p. 5.

*Results of a Faunistic Excursion in the Iser-, Riesen-, and Glatzer Gebirge.* By Dr. OTTO ZACHARIAS.

With the aid of subventions from the Berlin Academy and the Silesian Society the author has made a second excursion in the region of the Iser-, Riesen-, and Glatzer Gebirge, and obtained some interesting results, especially in relation to the Turbellaria. He has ascertained positively that, as indicated more than fifty years ago by Draparnaud, Dalyell, and Dugès, at certain times reproduction by spontaneous transverse division takes place in many freshwater Planarians. In the Iser Gebirge he has found a *Polycelis cornuta*, apparently identical with that described by O. Schmidt (*Zeitschr. wiss. Zool.* x. 1860, pp. 25, 26), which propagates exclusively by transverse division. In a brook near Hirschberg he obtained *Planaria tentaculata*, Drap. (already observed by Dugès), which for weeks together reproduced by simple division, or rather by terminal gemmation. In this *Planaria* he ascertained by serial sections that there was not the smallest trace of either male or female sexual organs. He states, however, that during the autumn individuals occasionally appeared in which distinctly differentiated sexual organs were recognizable.

Dr. Zacharias has also investigated the minute anatomy of the Turbellaria, especially with respect to the exact course of the two lateral nerves and the innervation of the pharynx. His investigations were made upon a new species described by him under the name of *Monotus relictus* (*Zeitschr. wiss. Zool.* xli. 1885, p. 505). In this species he succeeded in ascertaining the whole course of the lateral nerves (from the cerebral ganglion to the posterior extremity

of the body), and in obtaining sections which plainly showed the penetration of offshoots of the lateral nerves into the pharynx. His most important point is the demonstration of the existence in the connective layer of the pharynx of a large annular ganglion, which exceeds the true cerebral ganglion in size, and this explains the extraordinary mobility and vitality of the pharynx, which almost seems to be an independent creature.

The author further investigated the Cladocera and Copepoda of the district, and also its Hydrachnidæ; among the latter he notices his discovery of a new species of the genus *Sperchon*, Kramer, and of a new *Arrenurus*. He also obtained two new Rotatoria and an undescribed Turbellarian (belonging to the genus *Prohynchus*).—*Zoologischer Anzeiger*, no. 206, p. 575.

*Note on the Blastodermic Vesicle of Mammals.*

By Prof. A. C. HADDON, M.A., M.R.I.A.

The author suggests the view that in the blastodermic vesicle of mammals at the close of segmentation the inner mass, since it gives rise to the embryo proper, is perfectly comparable with the germinal disk of a fowl during the later stages of segmentation, which has sunk into the blastodermic vesicle owing to the absence of yolk. The outer layer corresponds to those epiblast-cells which are gradually enclosing the yolk, the so-called blastopore of Van Beneden indicating in an exaggerated manner the distinction between the embryonic and non-embryonic germinal layers. Epiblast-cells grow over this "blastopore" and form the covering cells (Deckenzellen); eventually the invagination of the germinal area is rectified, and there is a diploblastic ovum, the covering cells forming the spurious third layer which misled Van Beneden. The segmentation of the ovum is next discussed, and the conclusion is arrived at that the first immigration of blastospheres into the interior of the ovum (Van Beneden's stage 3) indicates the gastrula stage. It would further appear that this immigration was asymmetrical, much as there is an asymmetrical invagination of the hypoblast in telolecithal ova. The extension of cells of the blastodermic vesicle over the embryonic area is probably to be accounted for, in most cases, by the sinking of the latter into the cavity of the former. These "Deckenzellen" are really a portion of the blastodermic vesicle, that is of the yolk-sac, and they form the first adhesion between the ovum and the parent. This is compared with the imperfect attachment of the embryos of marsupials to the uterine wall, which is effected solely by the yolk-sac, as has been recently demonstrated by H. F. Osborn and by Caldwell.—*Proc. Dublin Soc. n. s. iv.* pp. 536–547.

*Note on Halcampa chrysanthellum, Peack.*

By Prof. A. C. HADDON, M.A., M.R.I.A.

In a paper read before the Royal Dublin Society on November 18, 1885, Professor A. C. Haddon withdrew the name applied by him to a species of *Halcampa* from Malahide, co. Dublin (*Proc. R. Dublin Soc. n. s. iv.* p. 396, pl. xvi.). After having examined a number of specimens it was found that this species is an extremely variable one; its synonyms are:—*H. (Xanthiopus) vittata*, Kef.; *H. (X.) bilateralis*, Kef.; *H. Kefersteini*, Andr.; *H. Andresii*, Hadd. A full description and figure were given.